**IT Applications Unit 3, AOS 2, Organisations and Data Management**

**Developing a RDMS, p 113-119**

**In creating the database the following is carried out:**

Creating the tables and relationships

Setting up the queries

Input forms

Creating macros

**Testing the solution, p 115**

1. Why is testing carried out?

Testing of a solution is carried out to ensure that all the features and functions work correctly and that the information is free of errors.

1. Distinguish between informal and formal testing.

Informal testing occurs during development as the developer tests to ensure his actions are behaving as expected while the Formal testing tests the overall solution after has been produced to ensure it solves the problem. This testing requires formal (hence the name) documentation proving the stage has been done.

1. Formal testing:
   1. Bench Test
      1. What does a bench test entail?

A bench test which occurs during the formal testing stage entails ensuring the calculations and formulas used work as expected in addition to the validation rules working by putting using test data with an expected result and minimal effort to fix any errors picked up.

* 1. Describe User acceptance testing.

User acceptance testing is used to ensure that the solution produced actually suit the requirements of the end user it was intended for. This often occurs by directing the user through a series of steps or getting them to interpret the information in the output and then reporting findings back to the developer for tweaking.

1. Testing validation
   1. Testing should test the boundaries of the validation rule. What does this mean?

Testing the boundaries of a validation rule refers to ensuring that the accepted range of values in the solution is the desired range of values only. For example if told that a field in a database should only accept values [10-50] if you used test data (4,9,10,25,50,51,100) then only 10,25 and 50 should be allowed through.

1. Testing the query

Testing the query refers to ensuring that any query used works correctly this is done by coming up with an appropriate set of test data and putting in a criteria.

1. Testing formulas

Testing formulas involve checking that all Formulas no matter where it is located are accurate in the result.

1. During which stage of the PSM does testing take place?

Development (3rd stage)

1. Why is testing performed during this stage?

Testing is performed during this stage as it is at nearly the end of the whole process meaning that any result in testing shouldn’t change unless a change is made.